PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 21529WO	FOR FURTHER ACTION	See item 4 below	
International application No. PCT/NL2004/000254	International filing date (day/month/year) 14 April 2004 (14.04.2004)	Priority date (day/month/year) 16 April 2003 (16.04.2003)]	
International Patent Classification (IPC 7 C08G 83/00	C) or national classification and IPC	•	
Applicant DSM IP ASSETS B.V.			

1.	This international preliminary in International Searching Author	•	I) is issued by the International Bureau on behalf of the
2.	This REPORT consists of a tot	al of 5 sheets, including this co	ver sheet.
	In the attached sheets, any refe to the international preliminary		the International Searching Authority should be read as a reference er I) instead.
3.	This report contains indications	s relating to the following item	s:
	Box No. I	Basis of the report	
	Вох №. П	Priority	
	Box No. III	Non-establishment of opinapplicability	tion with regard to novelty, inventive step and industrial
	Box No. IV	Lack of unity of invention	·
	Box No. V		Article 35(2) with regard to novelty, inventive step or industrial explanations supporting such statement
,	Box No. VI	Certain documents cited	
	Box No. VΠ	Certain defects in the inter	mational application
	Box No. VIII	Certain observations on th	e international application
4.	The International Bureau will on not, except where the applicant date (Rule 44bis .2).	communicate this report to desi t makes an express request und	gnated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but er Article 23(2), before the expiration of 30 months from the priority
			Date of issuance of this report 21 October 2005 (21.10.2005)
	The International But 34, chemin des Co 1211 Geneva 20, S	olombettes	Authorized officer Nora Lindner
Facsir	mile No. +41 22 740 14 35		Telephone No. +41 22 338 89 65

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

To: See form PCT/SA/220 See form PCT/SA/220 Applicant's or agent's file reference See form PCT/SA/220 International application No. PCTAL 2004/000254 International application No. PCTAL 2004/000254 International application No. PCTAL 2004/000254 International palemic (lassification (PC)) or both national classification and IPC Applicant See No. I Basis of the opinion Box No. I Priority Box No. II Priority Box No. II Priority Box No. IV Excit or unity of invention Box No. V Reasoned statement under Rule 43b/s. 1(a)(i) with regard to novelty, inventive step or industrial applicability Box No. VII Certain descuts in the international application Box No. VII Certain descuts in the international application FURTHER ACTION If a demand for international preliminary examination is made, this opinion will busually be considered to be a written opinion of the international preliminary examination is made, this opinion will busually be considered to be a written opinion of the international preliminary examination is made, this opinion will busually be considered to be a written opinion of the international preliminary examination is made, this opinion of the international preliminary examination is made, this opinion of the international searching Authority (PIPEA*). However, this does not apply where the applicant choices are provided above, considered to be a written opinion of the international Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the expiration of three months from the date or mailing of Form PCT/ISA/220. For further details, see notes to Form PCT/ISA/220.	From		APCHING AUTU	ODITY		·	RECEIVED
See form PCT/ISA/220 WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHOR! (PCT Rule 43bis.1) Date of mailing (daytmonthylean) see form PCT/ISA/210 (second sheet) Applicant's or agent's file reference See form PCT/ISA/220 (second sheet) Applicant's or agent's file reference See form PCT/ISA/220 (second sheet) PCT/ISA/220 International spellation No. International filing date (daytmonthylean) Priority date (daytmonthylean) International Patent Classification (IPC) or both national classification and IPC COSGB33:00 Applicant Box No. II Portority Box No. II Portority Box No. II Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. IV Lack of unity of invention Box No. IV Lack of unity of invention Box No. VI Certain decuments cited Box No. VI Certain decuments cited Box No. VI Certain defects in the International application Box No. VII Certain defects in the International application Box No. VII Certain defects in the International application FURTHER ACTION If a demand for International Preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has method the International Bureau under Rule 66: 1/bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant from the priority date, which have opinion is, see Form PCT/ISA/220.			ANCHING AUTH	ORITY		Р	
Applicant's or agent's file reference See form PCT/ISA/220 FOR FURTHER ACTION See paragraph 2 below		see form	PCT/ISA/220		INTERNATIO	DNAL SE	PINION OF THE ARCHING AUTHORIT
International application No. International filing date (day/month/year) 14.04.2004 16.04.2003 16.0		·				see form PCT	//SA/210 (second sheet)
PCT/NL2004/000254 International Patent Classification (IPC) or both national classification and IPC CO8G83/00 Applicant DSM IP ASSETS B.V. 1. This opinion contains indications relating to the following items: Box No. I Basis of the opinion Box No. II Priority Box No. II Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. IV Lack of unity of invention Box No. V Lack of unity of invention Box No. V Certain described application Box No. VI Certain described application Box No. VII Certain described application so the international application Box No. VIII Certain observations on the international application 2. FURTHER ACTION If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Breliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the international Bureau under Rule 66.15/s(b) that written opinions of the IPEA and the chosen IPEA has notified the submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further details, see notes to Form PCT/ISA/220.			•	•			
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	3.	For further details	s, see notes to Fo	orm PCT/ISA/220.			•
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Hoffmann, K

Telephone No. +49 89 2399-8419



WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/NL2004/000254

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	Box N	No. I Basis of the opinion
1.	With r	egard to the language, this opinion has been established on the basis of the international application in neguage in which it was field, unless otherwise indicated under this item.
	10	his opinion has been established on the basis of a translation from the original language into the following inguage , which is the language of a translation furnished for the purposes of international search under Rules 12.3 and 23.1(b)).
2.	With r	egard to any nucleotide and/or amino acid sequence disclosed in the international application and sary to the claimed invention, this opinion has been established on the basis of:
	a. type	e of material:
		a sequence listing
		table(s) related to the sequence listing
	b. forn	nat of material:
		in written format
		in computer readable form
	c. time	of filing/furnishing:
		contained in the international application as filed.
	. 🗆	filed together with the international application in computer readable form.
		furnished subsequently to this Authority for the purposes of search.
3.	CO	addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto as been filed or furnished, the required statements that the information in the subsequent or additional pies is identical to that in the application as filed or does not go beyond the application as filed, as propriate, were furnished.
4.	Additio	nal comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/NL2004/000254

В	ox No. II Priority					
. 🛭	The following document	has not bee	n furnished	d:		
	□ copy of the earlie	er application	n whose pi	riority has bee	n claimed (Rule 43 <i>b</i>	ois.1 and 66.7(a)).
•	☐ translation of the	earlier appl	ication who	ose priority ha	s been claimed (Rul	le 43 <i>bis.</i> 1 and 66.7(b)).
	Consequently it has not nevertheless been estab	been possib blished on th	le to consi e assumpt	der the validity ion that the re	of the priority claim levant date is the cla	n. This opinion has aimed priority date.
2. 🗆	This opinion has been ended has been found invalid (filing date indicated above	Rules 43 <i>bis</i> .	1 and 64.1). Thus for the	purposes of this or	act that the priority claim pinion, the international
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see separate sheet

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (SEPARATE SHEET)

International application No.

PCT/NL2004/000254

ad item V:

Invention:

The application refers to isotropic polymeric networks with a density lower than 1000 kg/m³ and a specific Young's modulus of at least 0.01 GPa.m³/kg (claim 4), shaped articles prepared therefrom (claim 6), their use as construction material (claim 7) and a process for the production of an isotropic polymeric network (claim 1). Expression (I) in claim 1 refers to the concentration of the reactants in the solution.

Cited documents:

D1: WO 02 100867 A (UNIV MICHIGAN ;CHOI JIWON (US); LAINE RICHARD M (US); TAMAKI RYO () 19 December 2002

D2: TAMAKI R ET AL: 'A POLYIMIDE NANOCOMPOSITE FROM OCTA(AMINOPHENYL)SILSESQUIOXANE' CHEMISTRY OF MATERIALS, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 15, 17 January 2003 (2003-01-17), pages 793-797, XP001153895 ISSN: 0897-4756.

Novelty:

Isotropic polymeric networks according to claim 4 are not known from the available prior art. Example 16 of D1 and the example on page 794, right column of D2 disclose a method for the preparation of a polyimide nanocomposite which corresponds to claim 1 of the application. However, as shown in Comparative Experiment A, the examples of D1 and D2 do not fulfill the expression (I) of claim 1. A network according to claim 4 could not be obtained. Thus the subject-matter of claims 1 and 4 is novel.

Inventive Step:

Object of the application is the provision of isotropic polymeric networks having a low density and a high Young's modulus. The examples demonstrate that this object is met by the networks of claim 4 and the process of claim 1. The cited prior art does not give a hint to the skilled person in order to solve the problem as posed. Thus the claimed subject-matter involves as well an inventive step.